

4.2 Input Requirements (for both MAC/GMC and FEAMAC)

This section describes how the data should appear in the input file, *infile*, where each line in the input file is limited to 80 characters. In the following, each block of input data will have its own subsection and will typically contain the following information:

- 1) statement of purpose
- 2) declaration of input data block
- 3) example(s)
- 4) notes

A data block has the following general format:

- 1) ***KEYWORD** beginning of data block
- 2) input line(s)
- 3) % end of data block

where

- 1) ***KEYWORD**: (denotes beginning of data block)

Each input data block begins with the appropriate keyword, which starts with the * symbol. For example, the keyword for selecting the method of integration is ***SOLVER**. The input routine scans the input file and locates the appropriate keyword and then reads the corresponding input data

- 2) Input line(s):

The input lines contain the necessary input data. The specific format of these input lines will be given in the following subsections. The capital letters denote actual variable names and lower case letters represent the possible input choices. Multiple inputs can be on one line, just as shown in the following. However, at **least one space must be used** to separate **data sets** on a single line.

Two special characters (& and #) are provided for entering the input.

The “&” (continuation) symbol:

For input data that is too long to fit on a **single 80 character line**, the “&” symbol is used as the continuation character. Thus, a line of data may be divided into a series of lines. For example, when entering the material properties all of the data cannot fit on a single line, thus the continuation character is required:

```
EL=11700.,11700.,0.365,0.365,4287.5,1.,1. &
VI=0.8E-8,0.1,0.1E-5,0.,0.85E-3,0.05,1.,1.,1.,3.3,1.8,1.35,1.,0.01
```

The “#” (comment) symbol:

The input file may also contain “comments” for the users convenience. The “#” symbol is used to mark a comment line, with the requirement that the “#” symbol appears in the first column.

3) % (denotes end of data block)

Each input block ends with the “%” symbol. The % symbol **should be** included as it signals the input routine that a particular data block has been completed.

A sample data block is as follows,

```
*SOLVER
#   NTF=2 ISTM=0.0001 ERR=0.1E-3
    NTF=2 ISTM=0.0000024 ERR=0.1E-2 %
```

Note how the # symbol is used to comment out a line of input data. Thus, the user can change various parameters by simply commenting out input lines containing different input data. Also, note how the data block is terminated with the % symbol and how it need not appear on a separate line.

☞ **Note:** It is suggested that the order of keywords in a given input file follow that given in this manual as some keyword ordering may give rise to problems, since in certain cases, **MAC/GMC** uses input from previous keywords to determine which input to read from later keywords.